

SEQUENCE LISTING

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<120> SELECTIVE INCORPORATION OF 5-HYROXYTRYPTOPHAN INTO PROTEINS IN MAMMALIAN CELLS

<130> 54A-001020PC

<160> 7

<170> Patentln version 3.2

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<212> DNA
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<220>
<223> encodes vall44Pro mutant of Bacillus subtilis tryptophanyl-tRNA synthetase

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 35 40 45
 Pro Gln Asp Arg Leu Glu Leu Arg Lys Asn lie Arg Asn Leu Ala Ala
 50 55 60
 Leu Tyr Leu Ala Val Gly Leu Asp Pro Glu Lys Ala Thr Leu phe lie
 65 70 75 80
 Gln Ser Glu Val Pro Ala His Ala Gln Ala Gly Trp Met Met Gln cys
 85 90 95
 Val Ala Tyr lie Gly Glu Leu Glu Arg Met Thr Gln Phe Lys Asp Lys
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 Ser Lys Gly Asn Glu Ala Val Val Ser Gly Leu Leu Thr Tyr Pro Pro
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 Arg Phe Asn Lys Lys Tyr Asn Asp lie Phe Thr lie Pro Glu Val Lys
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 lie Pro Lys Val Gly Ala Arg lie Met ser Leu Asn Asp Pro Leu Lys
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 Lys Met ser Lys ser Asp Pro Asn Gln Lys Ala Tyr lie Thr Leu Leu
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 210 215 220
 Ser Glu Gly lie val Lys Phe Asp Lys Glu Asn Lys Pro Gly Val Ser
 225 230 235 240
 Asn Leu Leu Thr lie Tyr ser lie Leu Gly Asn Thr Thr lie Glu Glu
 245 250 255
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 260 265 270

Leu Ala G u Val Val Val Asn Ala Leu Lys Pro lie Gin Asp Arg Tyr
275 280 285

Tyr G u Leu lie G u ser G u G u Leu Asp Arg lie Leu Asp G u G y
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